

Remarks/Arguments

35 U.S.C. §101

Claims 1-6, 12 and 13, stand rejected under 35 U.S.C. §101 because the claimed invention is directed to non-statutory subject matter.

The claims have been amended to clarify their association with a television signal receiving apparatus and its associated memory. Thus, it is submitted that this rejection has been satisfied and should be withdrawn.

35 U.S.C. §102

Claims 1, 2, 5 and 6, stand rejected under 35 U.S.C. §102(b) as being anticipated by Prodan (U.S. Patent No. 4,959,715).

Claims 1, 2, 5-8, and 11-13, stand rejected under 35 U.S.C. §102(b) as being anticipated by Dokic (U.S. Patent No. 5,699,392).

It is respectfully asserted that neither Prodan nor Dokic, alone or in combination, disclose a method comprising the step of:

“replacing a second bit rate multiplier value for adjusting the frequency of a local oscillator, stored in a memory of said television signal receiving device, with said first bit rate multiplier value for adjusting the frequency of a local oscillator, determined from said television signal,”

as described in currently amended claim 1.

Among the problems addressed by the present invention are the drifting of voltage controlled crystal oscillators (VCXO), the inability to track discrepancies in oscillation rate when incoming satellite timestamps are not available, and the inability to lock on to a colorburst signal in the event of too large of a discrepancy. One particular problem associated with VCXO drift is the ability of an integrated receiver decoder (IRD) to generate the color subcarrier, where the VCXO must maintain a frequency of 27 MHz

which is used by a PLL to generate 3.579545 MHz. Any discrepancy in this VCXO or the associated bit rate multiplier number (BRM) could prevent the display from locking onto the colorburst signal thereby causing the video signal to be displayed in monochrome, partial color, and/or with color shifts. (Specifications, pages 1-2)

To address these problems, the present application discloses a method and associated apparatus able to correct for timing discrepancies by adjusting oscillation frequency via adjustments to a BRM. More specifically, the method may comprise the steps of receiving a television signal, determining a first BRM value from said television signal and replacing a second BRM value stored in a memory with said first value. The apparatus may comprise a memory for storing a first oscillator parameter, an input for receiving a television signal comprising time reference data and a processing means for determining a second oscillator parameter in response to said time reference data and storing said second oscillator parameter in said memory. (Specification, pages 2-3)

Prodan relates to conversion of an interlaced transmission to a sequential scan display. (Prodan column 1, lines 28-30) More specifically, Prodan teaches “a method and apparatus for detecting a maximum vertical frequency component in a received interlaced transmission and substituting therefore, a uniform zero vertical frequency component in order to form a sequential scan display without introducing motion induced artifacts.” (Prodan Abstract) Prodan works under the assumption that the probability that a maximum vertical frequency component is produced by moving contours is much greater than the probability of the presence of precisely that component in a stationary pattern. (Prodan, column 1, lines 37-41) Prodan determines whether such a maximum vertical frequency component is present and, if so, assumes it was caused by motion and substitutes a zero vertical frequency component. (Prodan, column 1, lines 31-35)

Prodan does not describe determining a bit rate multiplier value from a television signal or replacing such a value in the memory of a television signal receiving apparatus. Thus, Prodan fails to disclose “replacing a second bit rate multiplier value for adjusting the frequency of a local oscillator, stored in a memory of said television signal receiving device, with said first bit rate multiplier value for adjusting the frequency of a local

oscillator, determined from said television signal,” as described in currently amended claim 1.

Dokic teaches a “clock recovery system and method for maintaining the frequency of a decoder clock at approximately the same frequency as an encoder clock based on program clock reference (PCR) values contained in a digital data stream. A voltage controlled oscillator (78) produces a decoder clock that is divided by a divider (66). The divided decoder clock clocks a 16-bit counter (64) to produce a system time clock (STC). In an exemplary embodiment, the 16-bit counter is constructed of an 8-bit hardware register (82) and an 8-bit software register (84). The 16-bit counter is initially loaded with a PCR value from the digital data stream. As subsequent PCR values are received in the data stream, a 16-bit subtractor (68) subtracts the value of the PCR from the value of the STC to produce an error signal. To produce a control signal the error signal is filtered, scaled, and added to a control variable within a low-pass filter and processor (70). The control signal is applied to the voltage controlled oscillator to adjust the oscillation frequency of the oscillator. A coarse mode of operation quickly adjusts the voltage controlled oscillator frequency, and a fine mode of operation more slowly adjusts the oscillator frequency. The two modes of operation ensure that the frequency of the decoder clock quickly approaches, and is kept approximately the same, as the frequency of the encoder clock.” (Dokic Abstract)

Dokic uses a 42-bit subtractor to provide a difference signal to a low-pass filter, the result of which is amplified, converted to an analog signal, and applied on a control line to a VCO. (Dokic, column, 3, lines 1-9) Dokic also does not describe determining a bit rate multiplier value from a television signal or replacing such a value in the memory of a television signal receiving apparatus. Thus, Dokic, like Prodan, fails to disclose “replacing a second bit rate multiplier value for adjusting the frequency of a local oscillator, stored in a memory of said television signal receiving device, with said first bit rate multiplier value for adjusting the frequency of a local oscillator, determined from said television signal,” as described in currently amended claim 1.

In view of the above remarks, it is respectfully submitted that there is no 35 USC 112 enabling disclosure provided by Prodan or Dokic, alone or in combination, which makes the present invention as claimed in claim 1 unpatentable. It is further submitted that independent claims 7 and 12 are allowable for at least the same reasons that claim 1 is allowable. Since dependent claims 2-6, 8-11, and 13-15, are dependent from allowable independent claims 1, 7, and 12, it is submitted that they too are allowable for at least the same reasons that their respective independent claims are allowable. Thus, it is further submitted that these rejections have been satisfied and should be withdrawn.

35 U.S.C. §103

Claims 3 and 4, stand rejected under 35 U.S.C. §103(a) as being unpatentable over Prodan (U.S. Patent No. 4,959,715).

Claims 3, 4, 9, 10, 14 and 15, stand rejected under 35 U.S.C. §103(a) as being unpatentable over Dokic (U.S. Patent No. 5,699,392).

Since dependent claims 3, 4, 9, 10, 14 and 15, are dependent from independent claims 1, 7, and 12, which are allowable for the reasons described above, it is submitted that they too are allowable for at least the same reasons that their respective independent claims are allowable. Thus, it is further submitted that this rejection has been satisfied and should be withdrawn.

Having fully addressed the Examiner's rejections it is believed that, in view of the preceding amendments and remarks, this application stands in condition for allowance. Accordingly then, reconsideration and allowance are respectfully solicited. If, however, the Examiner is of the opinion that such action cannot be taken, the Examiner is invited to contact the applicant's representative at (609) 734-6804, so that a mutually convenient date and time for a telephonic interview may be scheduled.

No fee is believed due. However, if a fee is due, please charge the additional fee to
Deposit Account 07-0832.

Respectfully submitted,

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